



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,150	09/24/2001	Akira Tsuboyama	684.3253	5363

5514 7590 01/15/2003

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

YAMNITZKY, MARIE ROSE

ART UNIT	PAPER NUMBER
----------	--------------

1774

DATE MAILED: 01/15/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/961,150

Applicant(s)

TSUBOYAMA ET AL.

Examin r

Marie R. Yamnitzky

Art Unit

1774

-- The MAILING DATE of this communication appears on th cover sh t with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/24/01, 11/14/01 and 12/18/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-11 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

(a) a metal coordination compound of formula (1-1) and luminescence device comprising the compound;

(b) a metal coordination compound of formula (1-2) and luminescence device comprising the compound;

(c) a metal coordination compound of formula (1-3) and luminescence device comprising the compound;

(d) a metal coordination compound of formula (1-4) and luminescence device comprising the compound;

(e) a metal coordination compound of formula (1-5) and luminescence device comprising the compound; and

(f) a metal coordination compound of formula (1-6) and luminescence device comprising the compound;

wherein for each of formulae (1-1) through (1-6), each of CyN1 and CyN2 is independently one of the formulae set forth on page 19 of the specification and each of CyC1 and CyC2 is independently one of the formulae set forth on pages 20 and 21 of the specification.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. That is, applicant is required to elect one of species (a)-(f) and further elect

Art Unit: 1774

one of the appropriate formulae for each of CyN1, CyN2, CyC1 and CyC2. Currently, claims 1, 2 and 6-8 are generic.

In addition, applicant is required to elect an ultimate species that will be used for the starting point for search and examination purposes. (For example, each of "Ex. Comp." 101-267 in Tables 1-7 in the specification is an ultimate species.)

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Jason Okun on 01/08/03, a provisional election was made with traverse to prosecute the invention of species (a) wherein in formula (1-1), each of CyN1 and CyN2 is "Pr" as shown on page 19 of the specification, and each of CyC1 and CyC2 is "Tn2" as shown on page 20 of the specification. All claims read on the elected species. Ex. Comp. 103 was elected as the ultimate species. Affirmation of this election must be made by applicant in replying to this Office action.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. The disclosure is objected to because of the following informalities:

The sentence beginning at page 3, line 24 in the specification is not clear.

Formula (1-2) on page 11 of the specification is incorrect. Apparently, the occurrence of "CyC1" in the upper right corner of the formula should read --CyN2--. Compare the formula on page 11 to page 29, line 20 and to the specific examples of compounds of formula (1-2) in Tables 2-7.

Appropriate correction is required.

Art Unit: 1774

5. Claims 2-5 and 7-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-5 and 8-11: Formula (1-2) as set forth in claims 2 and 8 is outside the scope of formula (1) as set forth in the independent claims because formula (1-2) only provides for one nitrogen connected to the platinum whereas the independent claims require two nitrogens connected to the platinum. Apparently, the occurrence of "CyC1" in the upper right corner of formula (1-2) as set forth in claims 2 and 8 should read --CyN2--. In addition, formula (1-2) as set forth in claim 2 is missing two bonds. Compare formula (1-2) in the claims to page 29, line 20 and to the specific examples of compounds of formula (1-2) in Tables 2-7 in the specification.

Claims 7-11: Claim 7 recites "adapted for use in a luminescence device". It is not clear what limitations are imposed upon the claimed compound by this recitation. It is not clear what constitutes an adaptation. It is not clear if this language requires the claimed compound to be luminescent.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-5 and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Maestri et al., "Photochemistry and Luminescence of Cyclometallated Complexes", pp. 1-68 in *Advances in Photochemistry*, Volume 17 (1992).

See pages 1-68 in their entirety. In particular, see pp. 3-11, 18-20, 31 and 44-50. The prior art discloses several platinum complexes that meet the limitations of the metal coordination compound of the present claims. Pt(ppy)_2 , for example, which has the platinum complex formula shown on p. 6 of the reference, is Ex. Comp. 128 of the present invention. The platinum complexes depicted after line 7 on p. 7 of the reference are Ex. Comp. 198, 130 (where $\text{R}=\text{H}$), 129 and 200 of the present invention, respectively. Pt(bph)(bpy) , which has the formula shown at the bottom of p. 7 of the reference, is Ex. Comp. 101 of the present invention.

Claims 1-5 are included in this rejection because the only positive limitations of the device of these claims is a layer comprising the metal coordination compound. The prior art disclosure of a rigid matrix comprising a platinum complex meeting the limitations of the metal coordination compound required by the present claims, wherein the platinum complex exhibits luminescence in the rigid matrix, is considered to meet the limitations of the luminescence device of claims 1-5.

8. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Thompson et al. (US 2002/0034656 A1).

Thompson et al. disclose several platinum complexes that meet the limitations of the metal coordination compound of the present claims. Thompson et al. disclose these complexes

for use in a light-emitting device comprising a pair of electrodes and, between the pair of electrodes, at least one layer comprising such a complex. See the whole reference. In particular, see the abstract, Figures 2 and 6b, and paragraphs [0111]-[0156].

The device of Thompson's Example 1 (paragraphs [0154]-[0156]) meets all the limitations of the device of present claims 1-6, presuming formula (1-2) as set forth in present claim 2 should actually be formula (1-2) as shown on page 29 of the present specification.

$\text{Pt}(\text{thpy})_2$ is Ex. Comp. 130 of the present invention.

Note that the formula shown for $\text{Pt}(\text{bph})(\text{bpy})$ in paragraphs [0123] and [0145] is incorrect; in the formula in paragraph [0123], the bottom right ring should be shown with a nitrogen instead of a carbon connected to Pt; in the formula in paragraph [0145], the upper left ring should be shown with a carbon instead of a nitrogen connected to Pt and the bottom right ring should be shown with a nitrogen instead of a carbon connected to Pt. (Biphenylinato-C,C)-bipyridinato-N,N)Pt(II) is Ex. Comp. 101 of the present invention.

The published application of Thompson et al. claims the benefit under 35 U.S.C. 120 of several prior U.S. applications. Of these prior applications, U.S. Application No. 09/274,609, filed 03/23/99, discloses all of the platinum complexes referenced above and teaches their use in light-emitting devices.

9. Miscellaneous:

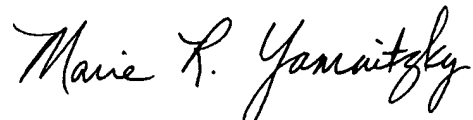
In line 2 of each of claims 5 and 11, --) should be inserted after "(1-1".

Art Unit: 1774

10. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (703) 308-4413. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax numbers for Art Unit 1774 are (703) 872-9311 for official after final faxes and (703) 872-9310 or (703) 305-5408 for all other official faxes. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (703) 872-9041.)

MRY
01/12/03



MARIE YAMNITZKY
PRIMARY EXAMINER

1774